

### REMARKS

Claims 1-19 are currently pending in the subject application. By this Amendment, the Abstract, specification and claims 4 and 11 are amended. The amendments made herein are non-narrowing in nature and have been made for reasons of form, and not to define over the art of record, as the independent claims contain features that already define over the art of record. Claims 1, 12 and 15 are independent.

Applicants request, in the next Office action, the Examiner acknowledge the Applicants' claim for foreign priority and receipt of a certified copy of the priority document.

Applicants request, in the next Office action, that the Examiner indicate the acceptability of the drawings filed October 24, 2003.

Applicants note with appreciation the Examiner's consideration of Applicants' Information Disclosure Statements filed March 22, 2004, June 29, 2004 and July 19, 2005.

#### A. Introduction

In the outstanding Office action, the Examiner objected to the abstract and the specification because of language informalities and because of the placement of the foreign priority reference; rejected claim 4 because line 1 is missing the word "electrode" after multi-channel; rejected claim 11 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter; rejected claims 1-2 and 7-8 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2002/0062090 to Chai et al. ("the Chai et al. reference"); rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over the Chai et al. reference; rejected claims 12-14 and 17-18 under 35 U.S.C. § 103(a) as being unpatentable over "Mapping Acupuncture Points Using Multi Channel Device" to Kwok et al. ("the Kwok et al. reference") in view of U.S. Patent Publication No. 2001/0034491 to Benson et al. ("the Benson et al. reference"); rejected claims 1-2, 4-5, 7, 10-11, 15-16 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Kwok et al. reference in view of the Benson et al.

reference and further in view of the Chai et al. reference; rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over the Kwok et al. reference in view of the Benson et al. and Chai et al. references and further in view of “Multielectrode Surface EMG for Noninvasive Estimation of Motor Unit Size,” to Sun et al. (“the Sun et al. reference”); and rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over the Kwok et al. reference in view of the Benson et al. and Chai et al. references and further in view of “The Design and Fabrication of a Micro-Thermal/Pressure-Sensor for Medical Electro-Skin Application,” to Ho (“the Ho reference”).

B. Objection to the Abstract

In the outstanding Office Action, the Examiner objected to Abstract due to minor informalities. By this Amendment, the Abstract has been amended as suggested by the Examiner. Withdrawal of the objection to the Abstract is respectfully requested.

C. Objection to the Specification

i) In the outstanding Office Action, the Examiner objected to the specification as containing informalities. Applicants submit that the Examiner’s comments and/or suggestions have been fully considered, and submit that the specification has been amended so as to obviate the objections.

ii) In the outstanding Office Action, the Examiner objected to the specification as the first paragraph of the specification should include a “Cross-Reference to Related Applications” or reference to a foreign priority document, e.g., Korean Patent Application No. 10-2002-0065185. However, Applicants respectfully submit that an incorporation by reference may be properly placed in the “Detailed Description of the Invention.” In particular, MPEP 608.01(a) describes the arrangement of the specification of a U.S. patent application, and refers to 37 CFR § 1.78 to describe what should be cited in the “Cross-

Reference to Related Applications” section of the application. That is, the three types of related applications are:

- U.S. Provisional applications as described under 35 U.S.C. § 119(e),
- U.S. non-provisional applications as described under 35 U.S.C. § 120, and
- Patent Cooperation Treaty (PCT) applications as described under 35 U.S.C. § 371.

Accordingly, because the MPEP and CFR do not specifically state that Foreign Priority applications should be cited in the “Cross-Reference to Related Applications” section of a U.S. Patent application, Applicants submit that the omission of the Foreign Priority applications in the “Cross-Reference to Related Applications” section (and inclusion in the “Detailed Description of the Invention”) is proper.

Reconsideration and withdrawal of the objections are respectfully requested.

D. Objection to Claim 4

In the outstanding Office action, the Examiner objected to claim 4 because line 1 is missing the word “electrode” after multi-channel. Applicants have amended claim 4 to obviate the objection. Withdrawal of the objection is respectfully requested.

E. Rejection of Claim 11 as Being Directed to Non-Statutory Subject Matter

In the outstanding Office action, the Examiner rejected claim 11 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. The Examiner stated that “an analysis software system is non-statutory subject matter as it is not a process, machine, or composition of matter.”

Applicants submit that claim 11 is properly directed to a statutory subject matter as the “signal processor” is merely a system for analyzing and performing a measurement. Nonetheless, Applicants have amended claim 11 to overcome the rejection. Reconsideration and withdrawal of the rejection are respectfully requested.

F. Asserted Anticipation Rejection of Claims 1-2 and 7-8

In the outstanding Office action, the Examiner rejected claims 1-2 and 7-8 under 35 U.S.C. § 102(e) as being anticipated by the Chai et al. reference. The rejection is respectfully traversed for at least the following reasons.

Applicants submit that the Chai et al. reference fails to disclose or suggest, *inter alia*, “a multi-channel electrode including a plurality of measurement sensors on an electrode surface having a predetermined area”, as recited in claim 1.

The Examiner asserted that paragraph [0025] in the Chai et al. reference discloses a “multi-channel electrode.” Specifically, because the Chai et al. reference discloses “an electrode array configuration”, the Examiner asserted that it reads on a “multi-channel electrode.” Applicants respectfully disagree.

Applicants submit that the Chai et al. reference merely teaches a plurality of electrodes grouped into four groups 230, 240, 250 and 260. There is no disclosure or suggestion that the electrodes in the Chai et al. reference are a multi-channel electrode that contains a plurality of measurement sensor. In other words, each electrode in the Chai et al. reference contains only one-channel (or one sensor).

Accordingly, the Chai et al. reference fails to disclose or suggest “a multi-channel electrode including a plurality of measurement sensors on an electrode surface having a predetermined area”, as recited in claim 1.

Because the Chai et al. reference fails to disclose each and every feature of claim 1, it cannot provided a basis for a rejection under 35 U.S.C. § 102(e).

Accordingly, Applicants respectfully submit that claim 1 is allowable over the Chai et al. reference. Therefore, Applicants respectfully request favorable reconsideration and

withdrawal of the rejection of independent claim 1 under 35 U.S.C. § 102(e) based on the Chai et al. reference.

Claims 2, 7 and 8 depend from independent claim 1. Hence, claims 2, 7 and 8 are at least allowable as depending from independent claim 1, which includes allowable subject matter that is neither taught nor suggested in the applied reference. Accordingly, Applicants respectfully request favorable reconsideration and withdrawal of the rejection of claims 2, 7 and 8 under 35 U.S.C. § 102(e) based on the Chai et al. reference.

G. Asserted Obviousness Rejection of Claim 9

In the outstanding Office action, the Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over the Chai et al. reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, Applicants submit that the Chai et al. reference fail to disclose or suggest all the features of claim 1, from which claim 9 directly depends. Thus, for at least the reasons discussed above, Applicants submit that the Chai et al. reference fails to disclose or suggest all of the features of claim 9. Accordingly, Applicants respectfully request that the rejection be withdrawn.

H. Asserted Obviousness Rejection of Claims 12-14 and 17-18

In the outstanding Office action, the Examiner rejected claims 12-14 and 17-18 under 35 U.S.C. § 103(a) as being unpatentable over the Kwok et al. reference in view of the Benson et al. reference. The rejection is respectfully traversed for at least the following reasons.

The Examiner asserted that the Kwok et al. reference teaches “positioning a multi-channel electrode parallel to the region to be measured.”<sup>1</sup> However, the multi-channel electrode in the Kwok et al. reference is not parallel to the region to be measured, but rather,

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<sup>1</sup> See Office Action, page 7, first paragraph.

positioned perpendicular to the region. That is, because one electrode in the Kwok et al. reference is positioned on a front portion of the arm and another electrode is positioned on a back portion of the arm (see page 71, FIG. 3), the multi-channel electrode is perpendicular to the region to be measured. Thus, the Kwok et al. reference fails to disclose or suggest “positioning a multi-channel electrode parallel to the region to be measured and adjusting a measurement pressure,” as recited in claim 12.

Further, the Examiner admitted that:

Kwok et al. reference disclose the claimed invention except for the steps of (a) disposing two electrodes of a constant current source centering around a region to be measured on a patient's skin to be separated from the region to be measured by a predetermined distance and applying a predetermined constant current to the skin through the two electrodes for a predetermined time period; and (c) applying the predetermined constant current between the two electrodes of the constant current source and measuring impedance while the predetermined constant current is being applied.<sup>2</sup>

Yet, the Examiner attempted to overcome the admitted deficiencies of the Kwok et al. reference by arguing that the Benson et al. reference teaches the above mentioned missing features. Applicants respectfully disagree.

Specifically, the Benson et al. reference fails to teach or suggest “disposing two electrodes of a constant current source centering around a region,” as recited in claim 12. Instead, the Benson et al. reference discloses placing the middle and index fingers of the right hand into contact with two electrodes A and B, respectively, and placing the middle and index fingers of the left hand into contact with two electrodes A and B, respectively.<sup>3</sup> In other words, the Benson et al. reference discloses placing the region to be measured onto the electrodes, rather than, disposing two electrodes “centered” around a region of the body part to be measured.

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<sup>2</sup> See Office Action, page 7, first full paragraph.

<sup>3</sup> See the Benson et al. reference, Abstract and FIG. 1.

Even assuming *arguendo* that the Examiner's position is correct, in which Applicants do not agree or admit to, the Examiner has failed to provide any evidence of motivation why the portable body fat monitor in the Benson et al. reference should be used in the multi-channel device in the Kwok et al. reference, or more specifically, evidence as to why one of ordinary skill in the art would be motivated to incorporate the electrodes in the Benson et al. reference into the multi-channel probe in the Kwok et al. reference. Accordingly, Applicants submit that the Examiner has failed to provide a proper *prima facie* case of obviousness under 35 U.S.C. §103.

Further, the Examiner is using *impermissible hindsight* reconstruction to reject the features recited in claim. 1. The Examiner's assertion that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made..., as taught by Benson et al. to measure skin impedance in the invention of Kwok et al. because this would provide a well known alternative to measure impedance with Ohm's Law"<sup>4</sup>, is not evidence for obviousness. Applicants disagree with the Examiner's reasoning, and submit that the mere possibility that one element in one reference could be used in another is not sufficient evidence of a suggestion or motivation to combine the two references. Applicants submit that the Examiner has used the present application as a blueprint, and selected a multi-channel device as the main device and then searched other prior art for the missing feature (e.g., constant current source) without identifying or discussing any specific evidence of motivation to combine, other than providing conclusionary statement regarding the knowledge of the art, motivation and obviousness. The Federal Circuit has noted that the PTO and the courts "cannot use hindsight reasoning or hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention," In re Fine, 5 USPQ2d 1780 (Fed. Cir. 1988), and that the best defense against hindsight based on

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<sup>4</sup> See Office action, page 6, paragraph 10.

obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references. Thus, Applicants submit that the Examiner has failed to provide any evidence of motivation for combining the teachings of the Benson et al. reference with the teachings of the Kwok et al. reference. Accordingly, the Examiner has not adequately supported the selection and combination of the Kwok et al. and the Benson et al. references to render the claim obvious.

Thus, for at least the reasons discussed above, Applicants submit that the combination of the Kwok et al. and the Benson et al. references fails to disclose or suggest all the features of claims 12-14 and 17-18. Accordingly, Applicants respectfully request that the rejection be withdrawn.

I. Asserted Obviousness Rejection of Claims 1-2, 4-5, 7, 10-11, 15-16 and 19

In the outstanding Office action, the Examiner rejected claims 1-2, 4-5, 7, 10-11, 15-16 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Kwok et al. reference in view of the Benson et al. reference and further in view of the Chai et al. reference. The rejection is respectfully traversed for at least the following reasons.

Applicants submit that the combination of the Kwok et al. reference and the Benson et al. reference fails to disclose or suggest all the features of claim 1, from which claim 2, 4-5, 7, 10-11, 15-16 and 19 directly depend. Specifically, the Kwok et al. reference and the Benson et al. reference, individually or in combination, fail to disclose or suggest, “a preprocessing unit for amplifying and filtering a potential value measured at each of the channels while the predetermined constant current is flowing through the region to be measured,” as recited in claim 1. The Examiner alleged that the Kwok et al. reference at page 69, paragraph 4, line 4, teaches the “predetermined constant current.” However, Applicants have read the above cited passage, including the entire reference, and cannot determine where or how the Kwok et al. reference discloses “a preprocessing unit for amplifying and filtering



a potential value measured at each of the channels while the predetermined constant current is flowing through the region to be measured.” Instead, the passage alluded by the Examiner merely discusses “allowing the weight of each pin to apply a constant pressure at each contact point.” This has nothing to do with applying a predetermined constant current when flowing through the region to be measured.

Applicants further submit that the Benson et al. reference and the Chai et al. reference fail to overcome the deficiencies of the Kwok et al. reference, as applied to claim 1. Thus, for at least the reasons discussed above, Applicants submit that the combination of the Kwok et al. reference, the Benson et al. reference, and the Chai et al. reference fails to disclose or suggest all the features of claims 1-2, 4-5, 7, 10-11, 15-16 and 19. Accordingly, Applicants respectfully request that the rejection be withdrawn.

J. Asserted Obviousness Rejection of Claim 3

In the outstanding Office action, the Examiner rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over the Kwok et al. reference in view of the Benson et al. and Chai et al. references and further in view of the Sun et al. reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, Applicants submit that the combination of the Kwok et al. reference and the Benson et al. reference fails to disclose or suggest all the features of claim 1, from which claim 3 directly depends. Applicants submit that the Sun et al. reference fails to overcome the deficiencies of the Kwok et al. reference, the Benson et al. reference and the Chai et al. reference, as applied to claim 1. Thus, for at least the reasons discussed above, Applicants submit that the combination of the Kwok et al. reference, the Benson et al. reference, the Chai et al. reference and the Sun et al. reference fails to disclose or suggest all the features of claim 3. Accordingly, Applicants respectfully request that the rejection be withdrawn.

K. Asserted Obviousness Rejection of Claim 6

In the outstanding Office action, the Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over the Kwok et al. reference in view of the Benson et al. and Chai et al. references, and further in view of the Ho reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, Applicants submit that the combination of the Kwok et al. reference, the Benson et al. reference and the Chai et al. reference fails to disclose or suggest all the features of claim 1, from which claim 6 directly depends. Applicants submit that the Ho reference fails to overcome the deficiencies of the Kwok et al. reference, the Benson et al. reference and the Chai et al. reference, as applied to claim 1. Thus, for at least the reasons discussed above, Applicants submit that the combination of the Kwok et al. reference, the Benson et al. reference, the Chai et al. reference and the Ho reference fails to disclose or suggest all the features of claim 6. Accordingly, Applicants respectfully request that the rejection be withdrawn.

L. Conclusion

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

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PETITION and  
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.